

REMARKS

Initially, Applicants filed an Information Disclosure Statement with a Form 1449, listing several documents, on December 7, 2004. The Examiner did not return a copy of the Form 1449. Therefore, Applicants cannot determine whether the documents listed on the Form 1449 were considered. Applicants respectfully request that the Examiner consider the listed documents, properly initial and sign the Form 1449, and return a copy of the Form 1449 to Applicants with the next communication.

In the non-final Office Action, the Examiner rejected claims 1-18, 20-23, 27, and 28 under 35 U.S.C. § 102(e) as anticipated by Passman et al. (U.S. Patent No. 6,493,759); and rejected claims 24 and 25 under 35 U.S.C. § 103(a) as unpatentable over Passman et al. in view of Fischer (U.S. Patent No. 5,371,734). The Examiner objected to claim 19 as dependent upon a rejected base claim, but would be allowable if rewritten in independent form to include the features of the base claim and any intervening claims.

By this Amendment, Applicants amend claims 24 and 25 to improve form and add new claims 29 and 30. Applicants appreciate the Examiner's identification of allowable subject matter, but respectfully traverse the Examiner's rejections under 35 U.S.C. §§ 102 and 103. Claims 1-25 and 27-30 are pending.

In paragraph 3 of the Office Action, the Examiner rejected claims 1-18, 20-23, 27, and 28 under 35 U.S.C. § 102(e) as allegedly anticipated by Passman et al. Applicants respectfully traverse the rejection.

A proper rejection under 35 U.S.C. § 102 requires that a single reference teach every aspect of the claimed invention either expressly or impliedly. Any feature not directly taught must be inherently present. In other words, the identical invention must be shown in as

complete detail as contained in the claim. See M.P.E.P. § 2131. Passman et al. does not disclose the combination of features recited in claims 1-18, 20-23, 27, and 28.

Claim 1 is directed to a method for integrating a wireless terminal into a wireless network. The method comprises determining whether the wireless terminal contains at least one functioning cluster transceiver, attempting to affiliate the wireless terminal with a cluster head as a cluster member if the wireless terminal contains the at least one functioning cluster transceiver, and operating the wireless terminal as a cluster head if the wireless terminal does not contain the at least one functioning cluster transceiver.

Passman et al. does not disclose the combination of features recited in claim 1. For example, Passman et al. does not disclose determining whether the wireless terminal contains at least one functioning cluster transceiver.

The Examiner alleged that Passman et al. discloses this feature and cited column 3, lines 43-53, of Passman et al. for support (Office Action, page 2). Applicants respectfully disagree.

At column 3, lines 43-53, Passman et al. discloses:

According to one aspect of the invention, the mobile communications station includes a memory and a processor. The memory has network information stored thereon. The processor (i) operates the mobile station as a cluster head station; (ii) resigns the mobile station from operating as a cluster head station; and (iii) maintains affiliation with a cluster head neighbor at least during a period in which the mobile station resigns from operating as a cluster head and commences operating as a cluster member of the cluster head neighbor.

In this section, Passman et al. discloses that a mobile communications station resigns as a cluster head and commences operating as a cluster member. Passman et al. describes in detail the manner in which a mobile station resigns as a cluster head and commences operating as a cluster member (col. 9, line 31 - col. 11, line 54). Nowhere does Passman et al. disclose that any determination is made as to whether the mobile station contains at least one functioning cluster transceiver, as required by claim 1.

Because Passman et al. does not disclose determining whether the wireless terminal contains at least one functioning cluster transceiver, Passman et al. cannot disclose attempting to affiliate the wireless terminal with a cluster head as a cluster member if it is determined that the wireless terminal contains at least one functioning cluster transceiver, as also recited in claim 1. Passman et al. discloses that a mobile station attempts to affiliate with a cluster head neighbor (col. 10, line 55 - col. 11, line 44). Passman et al. does not disclose, however, that the affiliation attempt is performed if the mobile station is determined to contain at least one functioning cluster transceiver, as required by claim 1.

Because Passman et al. does not disclose determining whether the wireless terminal contains at least one functioning cluster transceiver, Passman et al. cannot disclose operating the wireless terminal as a cluster head if it is determined that the wireless terminal does not contain at least one functioning cluster transceiver, as also recited in claim 1. Passman et al. describes several factors that a mobile station considers in determining whether to resign as a cluster head (col. 9, line 31 - col. 11, line 54). For example, Passman et al. discloses that a mobile station considers whether it is an articulation point, whether it has any affiliated cluster members, and whether it received an acknowledgement from a best cluster head neighbor (Fig. 5, S21, S24, S28, and S31). Nowhere does Passman et al. disclose that the mobile station operates as a cluster head if the mobile station is determined not to contain at least one functioning cluster transceiver, as required by claim 1.

For at least these reasons, Applicants submit that claim 1 is not anticipated by Passman et al. Claims 2-9 depend from claim 1 and are, therefore, not anticipated by Passman et al. for at least the reasons given with regard to claim 1. Claims 2-9 are also not anticipated by Passman et al. for reasons of their own.

For example, claim 3 recites determining whether the wireless terminal contains one or more functioning backbone transceivers if the attempted affiliation is not successful and operating the wireless terminal as a cluster head if the wireless terminal contains one or more functioning backbone transceivers. Passman et al. does not disclose that a determination is made as to whether a mobile station contains one or more functioning backbone transceivers. The Examiner did not address this feature and, therefore, did not establish a proper case of anticipation with regard to claim 3.

For at least these additional reasons, Applicants submit that claim 3 is not anticipated by Passman et al.

Claim 4 depends from claim 3 and is, therefore, not anticipated by Passman et al. for the additional reasons given with regard to claim 3.

Claim 10 recites features similar to features recited in claim 1. Claim 10 is, therefore, not anticipated by Passman et al. for at least reasons similar to reasons given with regard to claim 1. Claims 11-16 depend from claim 10 and are, therefore, not anticipated by Passman et al. for at least the reasons given with regard to claim 10.

Independent claim 17 is directed to a wireless network. The wireless network comprises a plurality of first wireless terminals and at least one second wireless terminal. The first wireless terminals are configured to operate as cluster heads by communicating with at least one other cluster head over one or more backbone links. Each one of the plurality of first wireless terminals includes one or more backbone transceivers. The at least one second wireless terminal is configured to operate as a cluster member by communicating with an associated cluster head over one or more local links. Each one of the at least one second wireless terminals includes one or more cluster transceivers. At least one of the first or second wireless terminals includes both a backbone transceiver and a cluster transceiver.

Passman et al. does not disclose the combination of features recited in claim 17. For example, Passman et al. does not disclose a first or second wireless terminal that includes both a backbone transceiver and a cluster transceiver. Instead, Passman et al. discloses that a mobile station includes a single transceiver (Fig. 1, col. 6, line 63 - col. 7, line 1). Passman et al. discloses that communication with other mobile stations occurs through different channels and sub-channels and by transmitting specific identifying information to each intended source or target (col. 7, lines 11-17). Passman et al. also discloses that a mobile station may include more than one transmitter and/or more than one receiver (col. 7, lines 5-6). Even if a mobile station in Passman et al. included multiple transmitters and/or receivers, this does not mean that one of the transmitters/receivers would operate as a backbone transceiver and another one of the transmitters/receivers would operate as a cluster transceiver, as required by claim 17.

The Examiner alleged that Passman et al. discloses a first or second wireless terminal that includes both a backbone transceiver and a cluster transceiver and cited Figures 4-9 and column 9, line 1 - column 10, line 55, of Passman et al. for support (Office Action, page 4). Applicants respectfully disagree.

In connection with Figures 4-9, Passman et al. discloses that mobile stations operate as cluster heads "CH" and cluster members "CM" to form various clusters. Passman et al. discloses that a cluster head can resign to operate as a cluster member (col. 9, line 31 - col. 11, line 54). Nowhere in connection with Figures 4-9, or elsewhere, does Passman et al. disclose that a mobile station includes both a backbone transceiver and a cluster transceiver, as required by claim 17.

At column 9, line 1 - column 10, line 55, Passman et al. discloses a technique by which a mobile station can resign as a cluster head. Nowhere in connection with this section, or any

other section, does Passman et al. disclose that a mobile station includes both a backbone transceiver and a cluster transceiver, as required by claim 17.

For at least these reasons, Applicants submit that claim 17 is not anticipated by Passman et al. Claims 18 and 20-23 depend from claim 17 and are, therefore, not anticipated by Passman et al. for at least the reasons given with regard to claim 17.

Independent claim 27 is directed to a wireless terminal. The wireless terminal comprises means for determining whether the wireless terminal includes at least one cluster radio, means for determining whether the wireless terminal includes at least one backbone radio when the wireless terminal includes at least one cluster radio, means for operating as a cluster head when the wireless terminal includes at least one cluster radio and at least one backbone radio, and means for operating as a cluster member when the wireless terminal includes at least one cluster radio but no backbone radio.

Passman et al. does not disclose the combination of features recited in claim 27. For example, Passman et al. does not disclose means for determining whether the wireless terminal includes at least one cluster radio. In other words, Passman et al. does not disclose that a wireless terminal makes a determination as to whether it includes at least one cluster radio. The Examiner did not address this feature and, therefore, did not establish a proper case of anticipation with regard to claim 27.

Because Passman et al. does not disclose means for determining whether the wireless terminal includes at least one cluster radio, Passman et al. cannot disclose means for determining whether the wireless terminal includes at least one backbone radio when it is determined that the wireless terminal includes at least one cluster radio, as further recited in claim 27. The Examiner did not address this feature and, therefore, did not establish a proper case of anticipation with regard to claim 27.

Because Passman et al. does not disclose means for determining whether the wireless terminal includes at least one cluster radio or means for determining whether the wireless terminal includes at least one backbone radio when it is determined that the wireless terminal includes at least one cluster radio, Passman et al. cannot disclose means for operating as a cluster head when it is determined that the wireless terminal includes at least one cluster radio and at least one backbone radio, or means for operating as a cluster member when it is determined that the wireless terminal includes at least one cluster radio but no backbone radio, as further recited in claim 27.

For at least these reasons, Applicants submit that claim 27 is not anticipated by Passman et al. Claim 28 depends on claim 27 and is, therefore, not anticipated by Passman et al. for at least the reasons given with regard to claim 27.

In paragraph 5 of the Office Action, the Examiner rejected claims 24 and 25 under 35 U.S.C. § 103(a) as allegedly unpatentable over Passman et al. in view of Fischer. Applicants respectfully traverse the rejection.

As explained in Applicants' prior response, Applicants submit that Passman et al. does not qualify as prior art under 35 U.S.C. § 103(a). Accordingly, a rejection under 35 U.S.C. § 103(a) based on Passman et al. is not a proper rejection.

35 U.S.C. § 103(c) qualifies 35 U.S.C. § 103(a) and states:

(c) Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Passman et al. qualifies as prior art under 35 U.S.C. § 102 only under subsection (e). The present application and the Passman et al. patent were, at the time the invention of the present application was made, owned by or subject to an obligation of assignment to BBNT Solutions

LLC. The Passman et al. patent was assigned to BBNT Solutions LLC and recorded at Reel 011082 and Frame 0583 on November 3, 2000. The present application also contains a recorded assignment from the inventors to BBNT Solutions LLC. Accordingly, the Passman et al. patent is not available to preclude patentability under 35 U.S.C. § 103(a).

Fischer does not disclose or suggest the combination of features recited in claims 25 and 26.

For at least these reasons, Applicants respectfully request the reconsideration and withdrawal of the rejection of claims 25 and 26 under 35 U.S.C. § 103(a) based on Passman et al. and Fischer.

New independent claim 29 is directed to a method performed by a first terminal, where the first terminal is a wireless, mobile terminal. The method comprises receiving beacons from a plurality of second terminals, where at least one of the beacons is received according to a first wireless access protocol and at least one other one of the beacons is received according to a second wireless access protocol; determining a signal strength associated with each of the second terminals based on the beacons received according to the first and second wireless access protocols; sending an affiliation message to one of the second terminals based on the determined signal strength; determining whether a response to the affiliation message is received from the one of the second terminals; and affiliating with the one of the second terminals when the response to the affiliation message is received from the one of the second terminals.

None of the references of record discloses the combination of features recited in claim 29. Accordingly, claim 29 is patentable over the references of record. Claim 30 depends from claim 29 and is, therefore, patentable over the references of record for at least the reasons that claim 29 is patentable.

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and allowance of pending claims 1-25 and 27-30.

Applicants believe no fee is due with this response other than as reflected on the enclosed Amendment Transmittal. However, if any additional fee is due, please charge our Deposit Account No. 18-1945, under Order No. BBNT-P01-144 from which the undersigned is authorized to draw.

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Respectfully submitted,

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